QUALYS SECURITY CONFERENCE 2020

Security Data Lake and Analytics Cloud Platform

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Cloud Platform Evolution

Growing portfolio with 19+ apps

Cloud Agent driving product adoption

Organically built multi-petabyte data lake

Better cross-product and third-party data correlation…

Qualys Cloud Platform
Web Apps
Clouds
Endpoints
On-premises

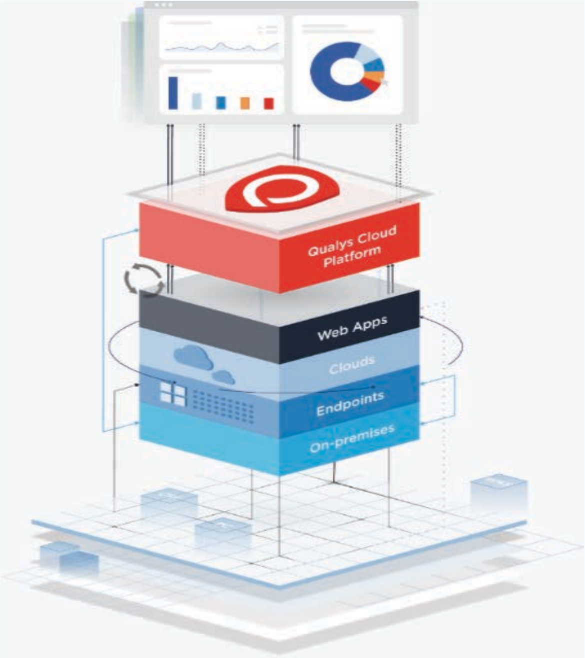
Data Lake and Security Analytics Goals

Provide a coherent and actionable view of your security posture by breaking down security data silos

Coalesce all data into a centralized highly scalable security data lake

Combine and enrich Qualys generated findings with third party signals

Leverage the strength of Qualys Cloud Platform, Cloud Agent and Apps to build a comprehensive security analytics platform



Security Analytics Use Cases

Real-time streaming correlation and analytics with out-of-box rules

Out-of-band batch analytics over historical data

Ad-hoc querying and threat hunting on enriched and security aware data sets

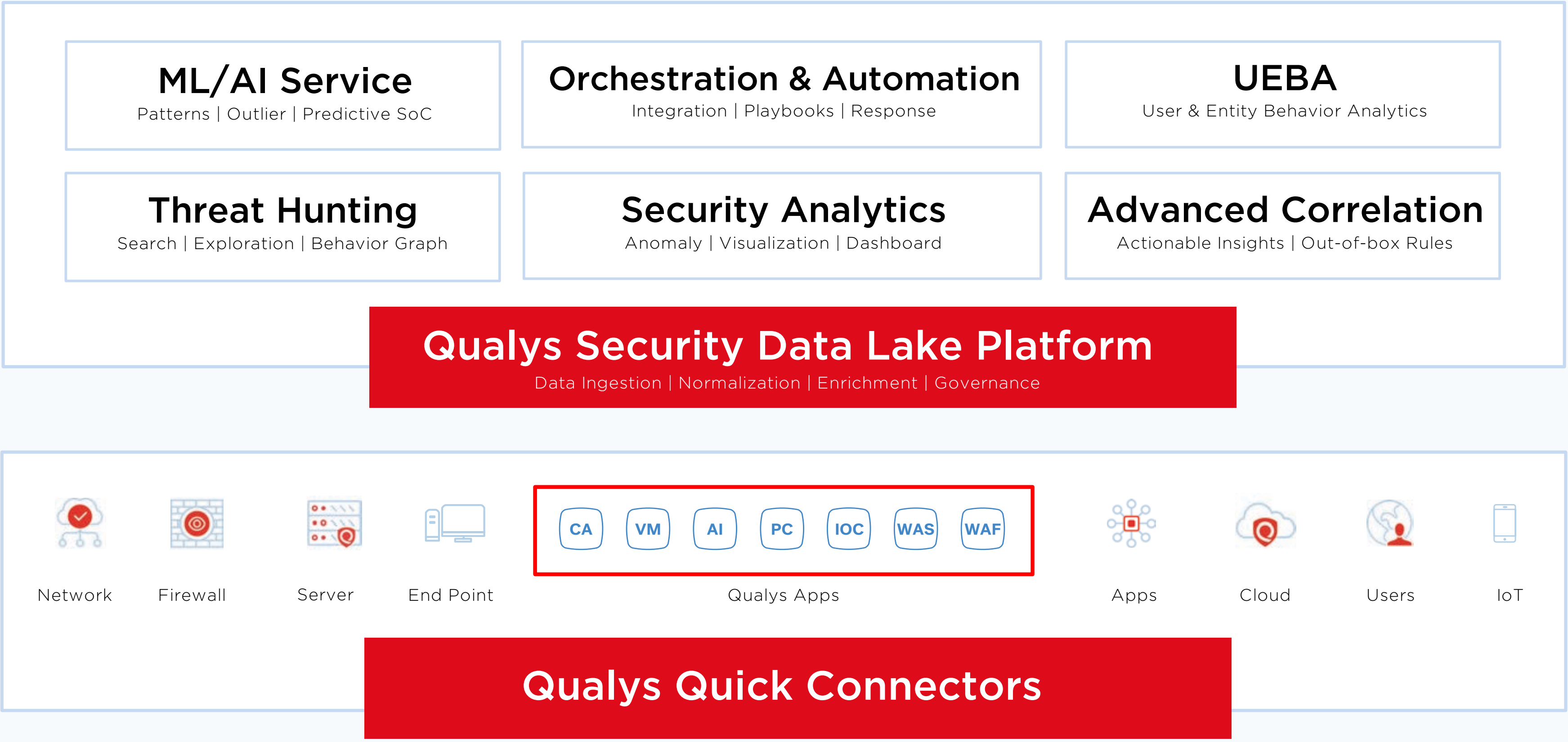
Advanced analytics use cases using machine learning

Orchestration with playbooks

Response and endpoint protection

Qualys Cloud Platform
Web Apps
Clouds
Endpoints
On-premises

Advanced Correlation and Analytics



ML/AI Service
Patterns | Outlier | Predictive SoC

Orchestration & Automation
Integration | Playbooks | Response

UEBA
User & Entity Behavior Analytics

Threat Hunting
Search | Exploration | Behavior Graph

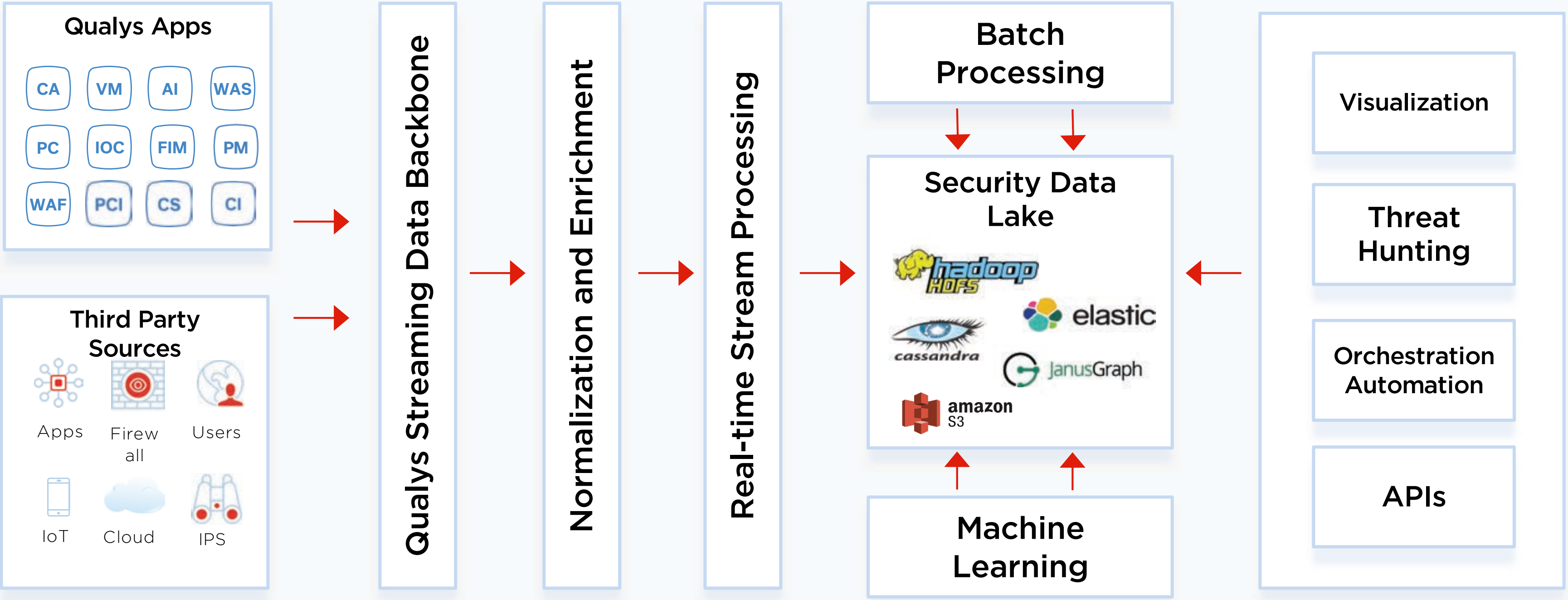
Security Analytics
Anomaly | Visualization | Dashboard

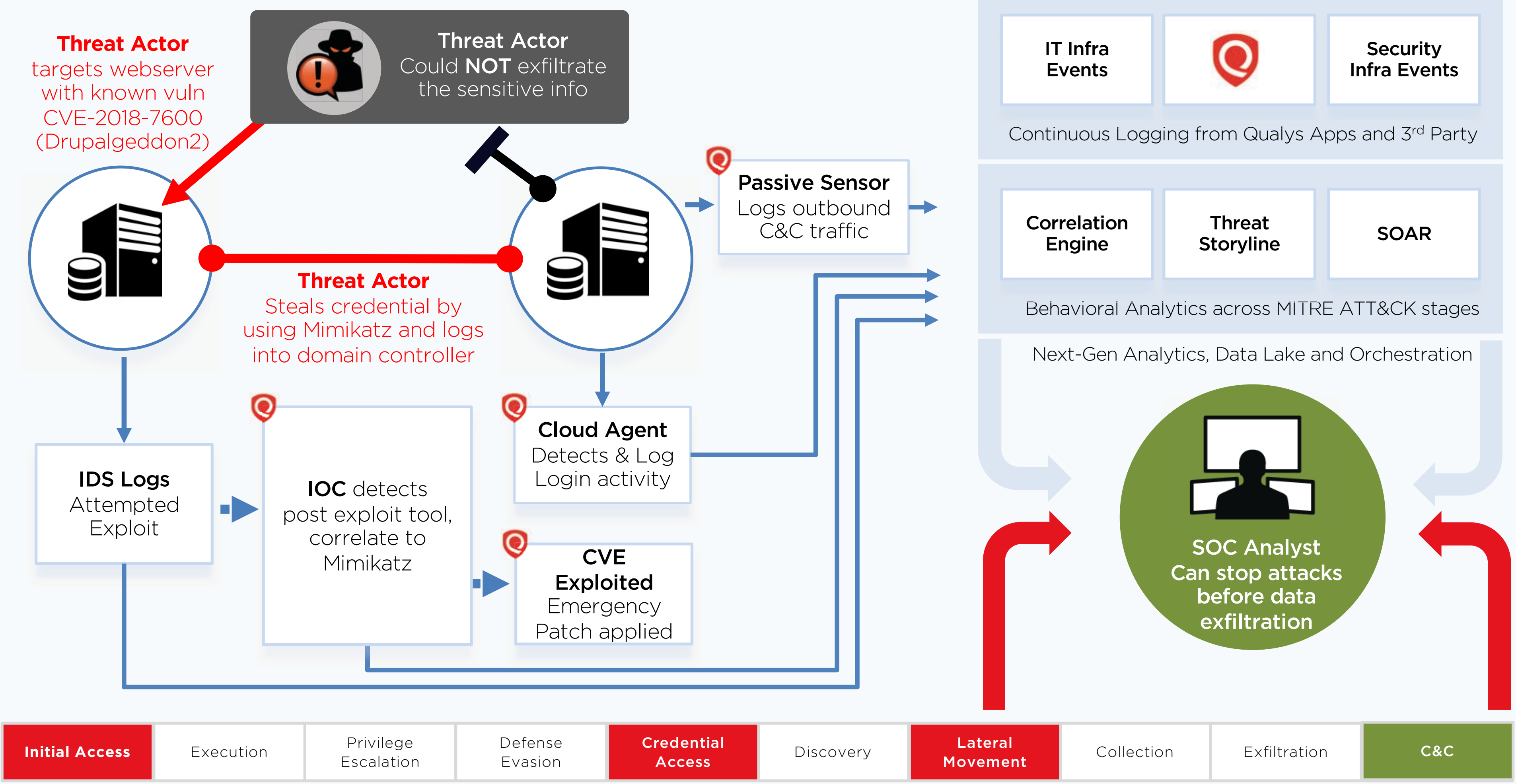
Advanced Correlation
Actionable Insights | Out-of-box Rules

Qualys Security Data Lake Platform
Data Ingestion | Normalization | Enrichment | Governance

Qualys Quick Connectors

Correlation and Data Platform Architecture





Threat Actor targets webserver with known vuln CVE-2018-7600 (Drupalgeddon2)

Threat Actor Could **NOT** exfiltrate the sensitive info

Threat Actor Steals credential by using Mimikatz and logs into domain controller

Passive Sensor Logs outbound C&C traffic

IDS Logs Attempted Exploit

IOC detects post exploit tool, correlate to Mimikatz

Cloud Agent Detects & Log Login activity

CVE Exploited Emergency Patch applied

IT Infra Events

Security Infra Events

Continuous Logging from Qualys Apps and 3rd Party

Correlation Engine

Threat Storyline

SOAR

Behavioral Analytics across MITRE ATT&CK stages

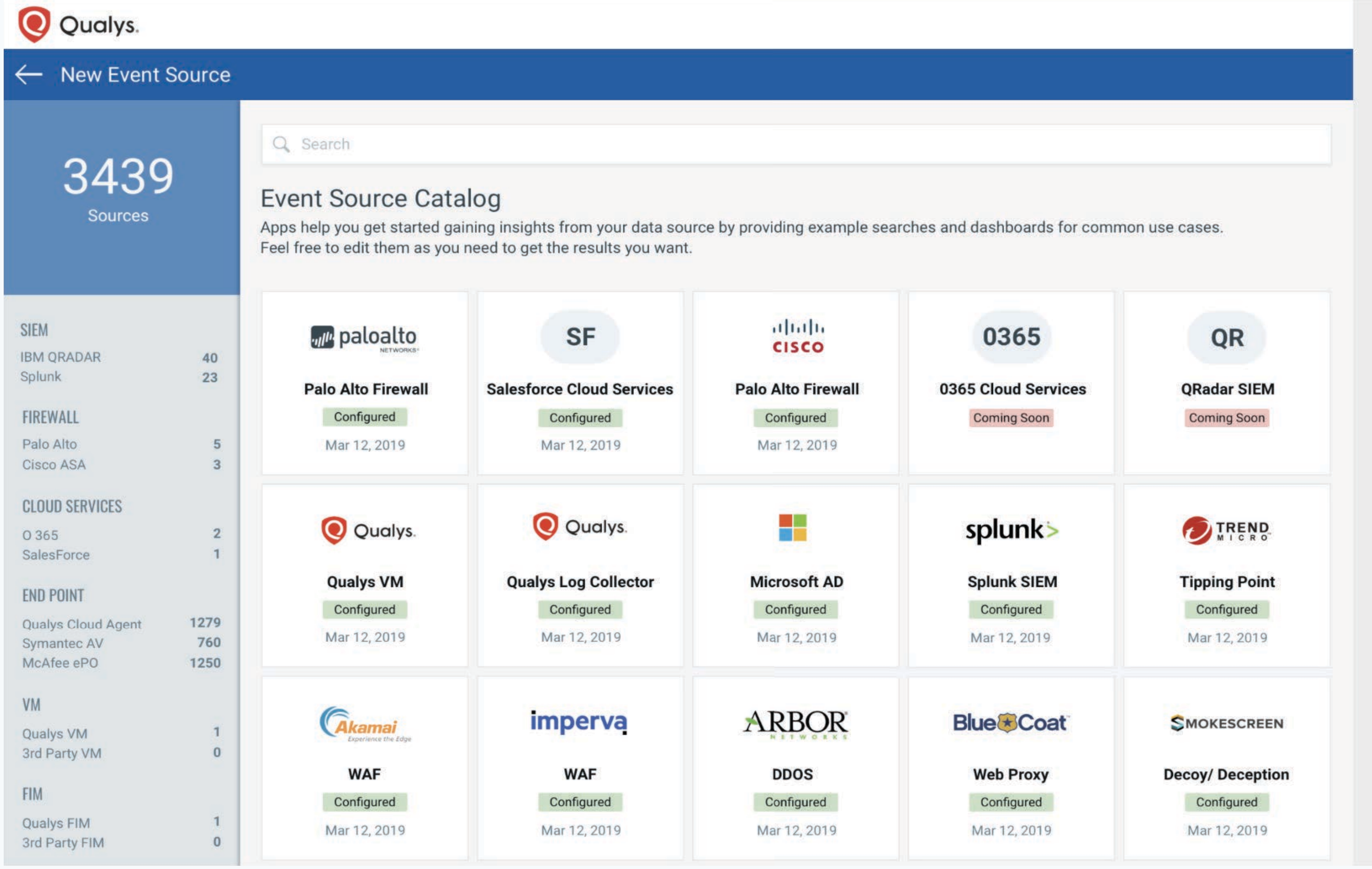
Next-Gen Analytics, Data Lake and Orchestration

SOC Analyst Can stop attacks before data exfiltration

Initial Access	Execution	Privilege Escalation	Defense Evasion	Credential Access	Discovery	Lateral Movement	Collection	Exfiltration	C&C

MITRE ATT&CK Stages

Qualys.



Qualys.

New Event Source

3439
Sources

SIEM	
IBM QRADAR	40
Splunk	23

FIREWALL	
Palo Alto	5
Cisco ASA	3

CLOUD SERVICES	
O 365	2
SalesForce	1

END POINT	
Qualys Cloud Agent	1279
Symantec AV	760
McAfee ePO	1250

VM	
Qualys VM	1
3rd Party VM	0

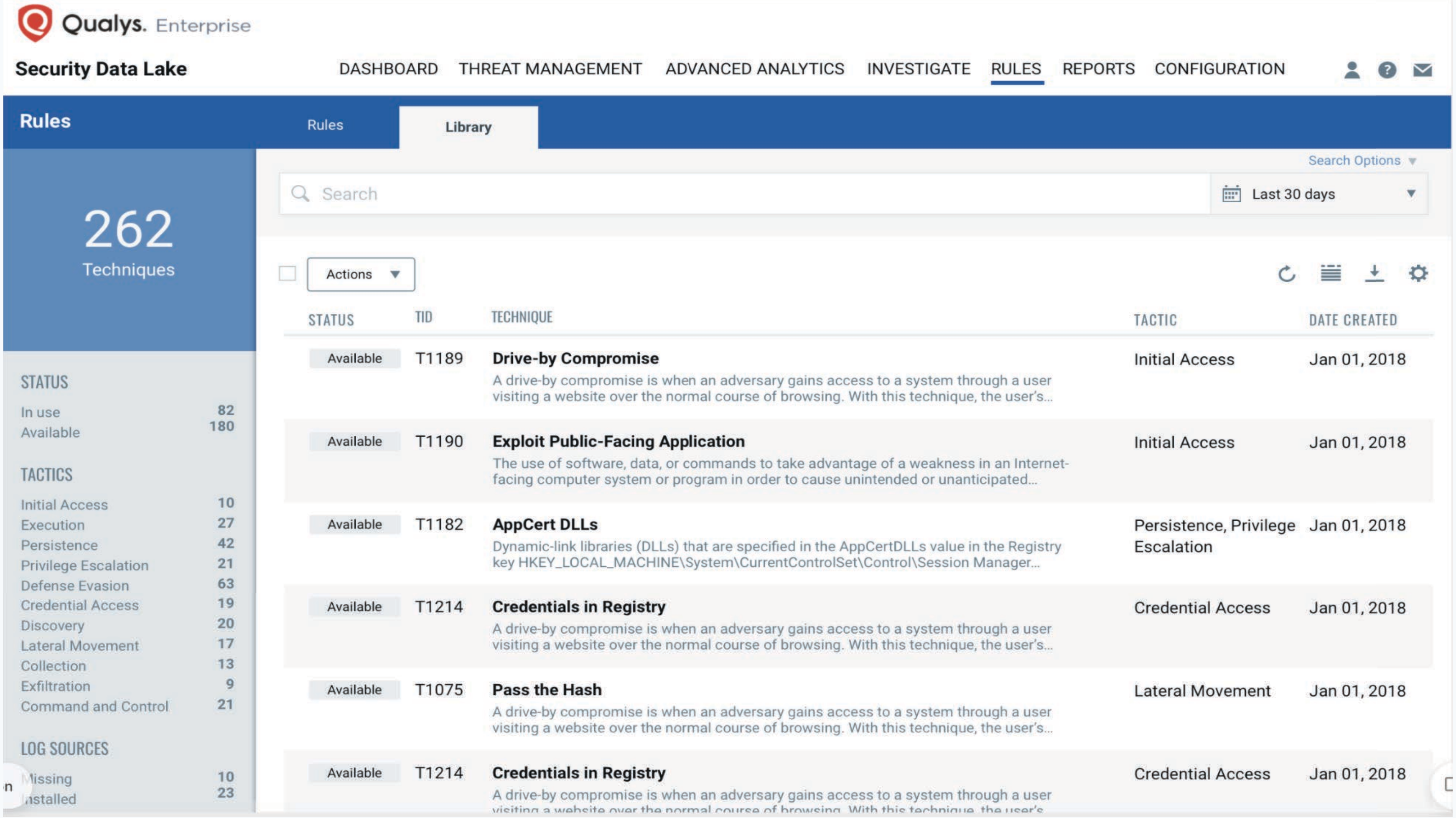
FIM	
Qualys FIM	1
3rd Party FIM	0

Search

Event Source Catalog

Apps help you get started gaining insights from your data source by providing example searches and dashboards for common use cases.
Feel free to edit them as you need to get the results you want.

paloalto NETWORKS **Palo Alto Firewall** Configured Mar 12, 2019	SF **Salesforce Cloud Services** Configured Mar 12, 2019	cisco **Palo Alto Firewall** Configured Mar 12, 2019	0365 **0365 Cloud Services** Coming Soon	QR **QRadar SIEM** Coming Soon
Qualys. **Qualys VM** Configured Mar 12, 2019	Qualys. **Qualys Log Collector** Configured Mar 12, 2019	**Microsoft AD** Configured Mar 12, 2019	splunk> **Splunk SIEM** Configured Mar 12, 2019	TREND MICRO **Tipping Point** Configured Mar 12, 2019
Akamai Experience the Edge **WAF** Configured Mar 12, 2019	imperva **WAF** Configured Mar 12, 2019	ARBOR NETWORKS **DDOS** Configured Mar 12, 2019	BlueCoat **Web Proxy** Configured Mar 12, 2019	SMOKESCREEN **Decoy/ Deception** Configured Mar 12, 2019



262 Techniques

STATUS

In use	82
Available	180

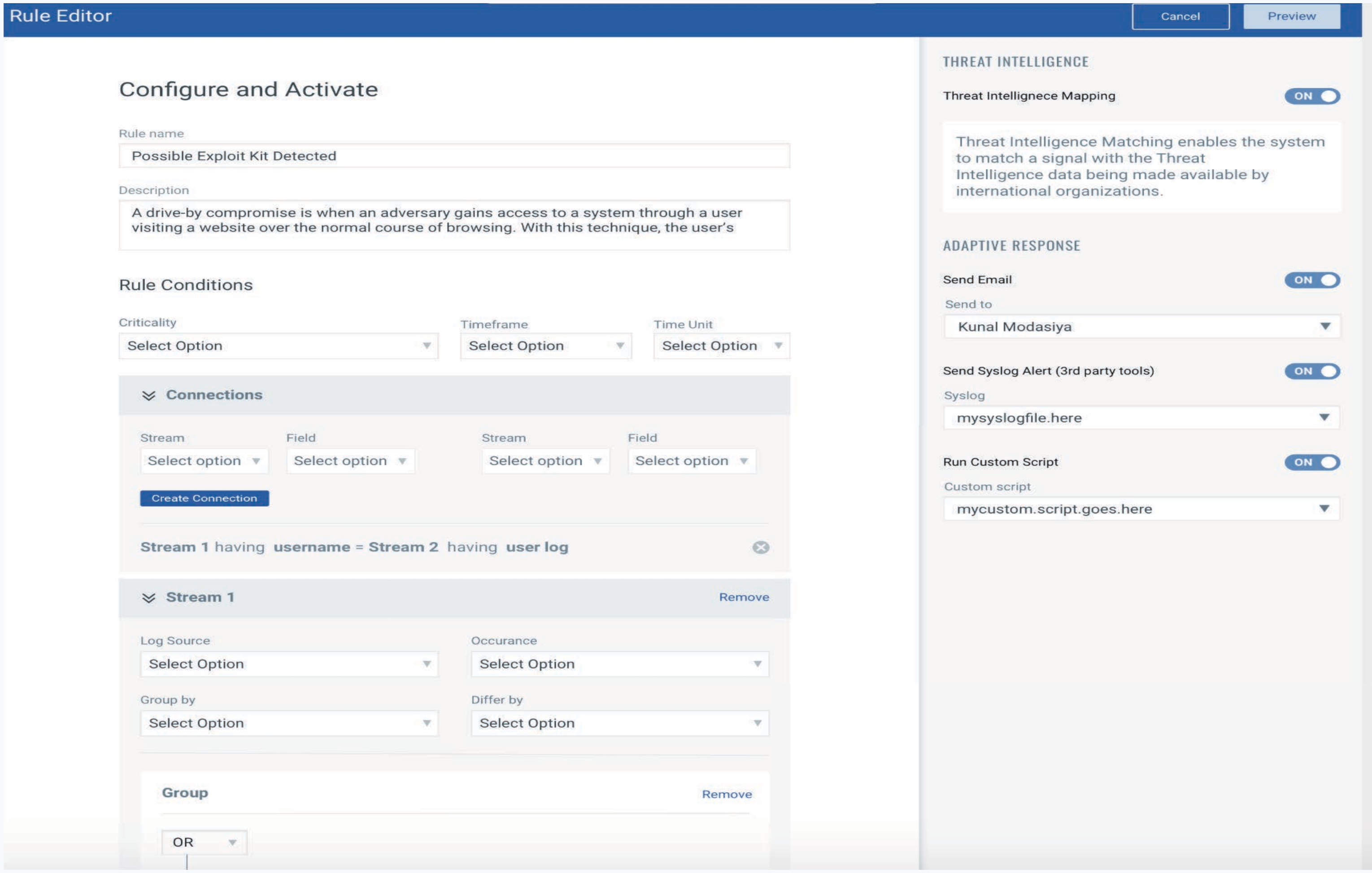
TACTICS

Initial Access	10
Execution	27
Persistence	42
Privilege Escalation	21
Defense Evasion	63
Credential Access	19
Discovery	20
Lateral Movement	17
Collection	13
Exfiltration	9
Command and Control	21

LOG SOURCES

Missing	10
Installed	23

STATUS	TID	TECHNIQUE	TACTIC	DATE CREATED
Available	T1189	**Drive-by Compromise** A drive-by compromise is when an adversary gains access to a system through a user visiting a website over the normal course of browsing. With this technique, the user's...	Initial Access	Jan 01, 2018
Available	T1190	**Exploit Public-Facing Application** The use of software, data, or commands to take advantage of a weakness in an Internet-facing computer system or program in order to cause unintended or unanticipated...	Initial Access	Jan 01, 2018
Available	T1182	**AppCert DLLs** Dynamic-link libraries (DLLs) that are specified in the AppCertDLLs value in the Registry key HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\Session Manager...	Persistence, Privilege Escalation	Jan 01, 2018
Available	T1214	**Credentials in Registry** A drive-by compromise is when an adversary gains access to a system through a user visiting a website over the normal course of browsing. With this technique, the user's...	Credential Access	Jan 01, 2018
Available	T1075	**Pass the Hash** A drive-by compromise is when an adversary gains access to a system through a user visiting a website over the normal course of browsing. With this technique, the user's...	Lateral Movement	Jan 01, 2018
Available	T1214	**Credentials in Registry** A drive-by compromise is when an adversary gains access to a system through a user visiting a website over the normal course of browsing. With this technique, the user's	Credential Access	Jan 01, 2018



Configure and Activate

Rule name: Possible Exploit Kit Detected

Description: A drive-by compromise is when an adversary gains access to a system through a user visiting a website over the normal course of browsing. With this technique, the user's

Rule Conditions

Criticality: Select Option

Timeframe: Select Option

Time Unit: Select Option

Connections

Stream: Select option | Field: Select option | Stream: Select option | Field: Select option

Stream 1 having **username** = **Stream 2** having **user log**

Stream 1

Log Source: Select Option

Occurance: Select Option

Group by: Select Option

Differ by: Select Option

Group

OR

THREAT INTELLIGENCE

Threat Intellignece Mapping: ON

Threat Intelligence Matching enables the system to match a signal with the Threat Intelligence data being made available by international organizations.

ADAPTIVE RESPONSE

Send Email: ON

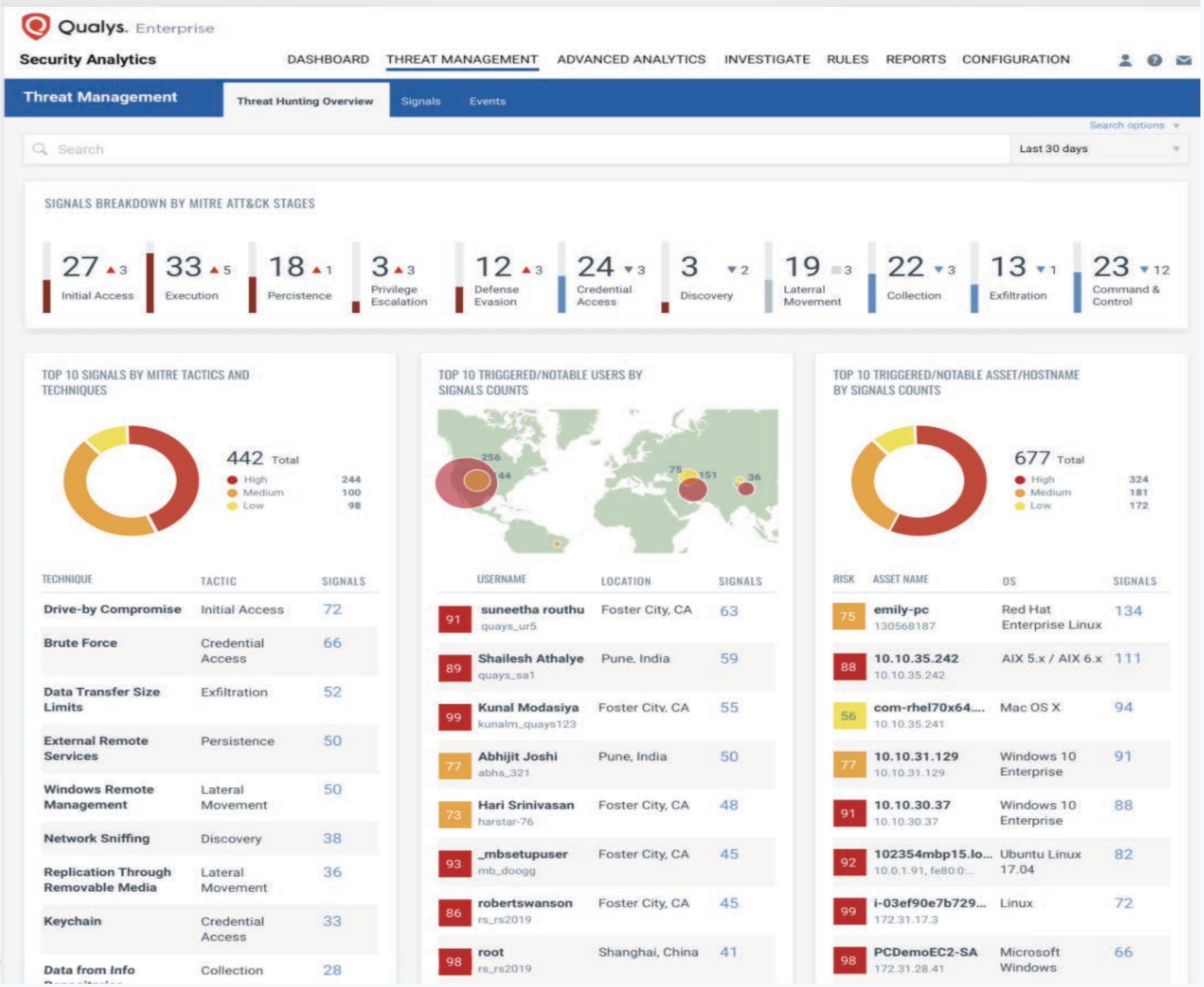
Send to: Kunal Modasiya

Send Syslog Alert (3rd party tools): ON

Syslog: mysyslogfile.here

Run Custom Script: ON

Custom script: mycustom.script.goes.here



SIGNALS BREAKDOWN BY MITRE ATT&CK STAGES

Initial Access	Execution	Percistence	Privilege Escalation	Defense Evasion	Credential Access	Discovery	Laterral Movement	Collection	Exfiltration	Command & Control
27 ▲3	33 ▲5	18 ▲1	3 ▲3	12 ▲3	24 ▼3	3 ▼2	19 ■3	22 ▼3	13 ▼1	23 ▼12

TOP 10 SIGNALS BY MITRE TACTICS AND TECHNIQUES

442 Total

● High	244
● Medium	100
● Low	98

TECHNIQUE	TACTIC	SIGNALS
Drive-by Compromise	Initial Access	72
Brute Force	Credential Access	66
Data Transfer Size Limits	Exfiltration	52
External Remote Services	Persistence	50
Windows Remote Management	Lateral Movement	50
Network Sniffing	Discovery	38
Replication Through Removable Media	Lateral Movement	36
Keychain	Credential Access	33
Data from Info	Collection	28

TOP 10 TRIGGERED/NOTABLE USERS BY SIGNALS COUNTS

	USERNAME	LOCATION	SIGNALS
91	suneetha routhu quays_ur5	Foster City, CA	63
89	Shailesh Athalye quays_sa1	Pune, India	59
99	Kunal Modasiya kunalm_quays123	Foster City, CA	55
77	Abhijit Joshi abhs_321	Pune, India	50
73	Hari Srinivasan harstar-76	Foster City, CA	48
93	_mbsetupuser mb_doogg	Foster City, CA	45
86	robertswanson rs_rs2019	Foster City, CA	45
98	root rs_rs2019	Shanghai, China	41

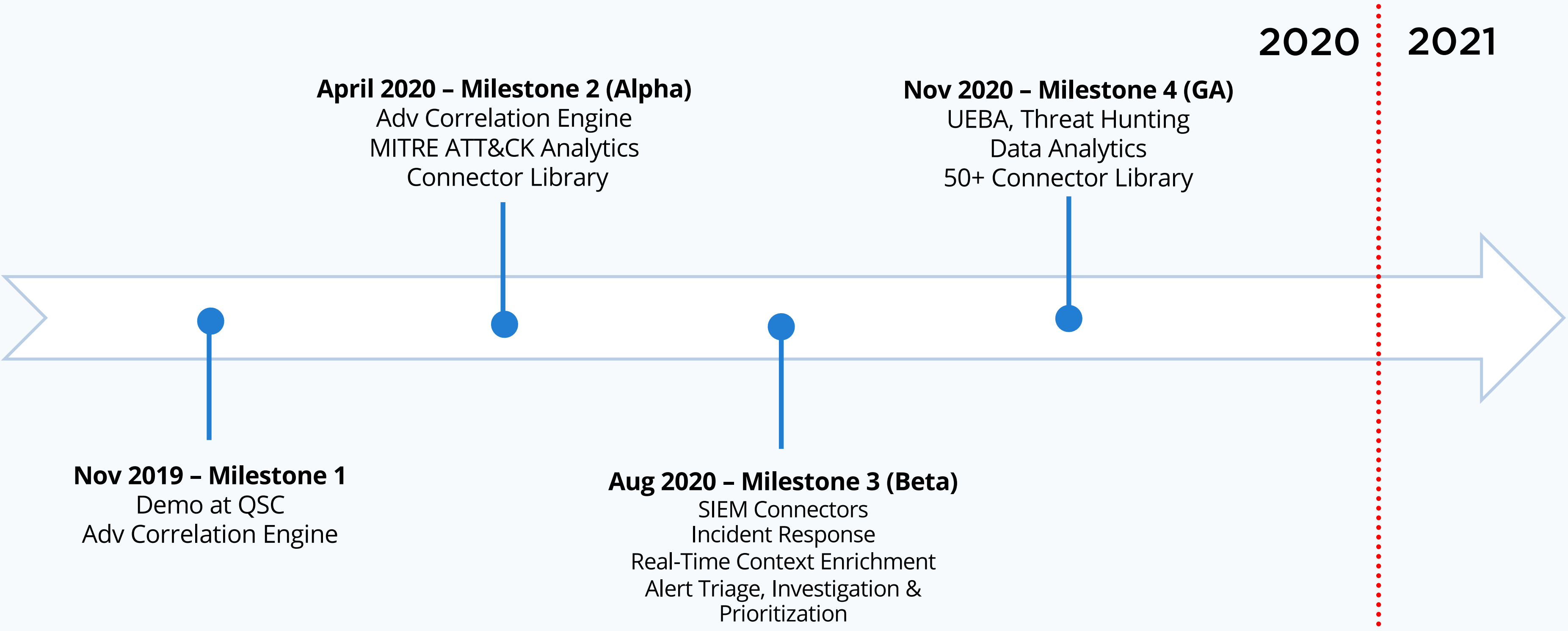
TOP 10 TRIGGERED/NOTABLE ASSET/HOSTNAME BY SIGNALS COUNTS

677 Total

● High	324
● Medium	181
● Low	172

RISK	ASSET NAME	OS	SIGNALS
75	emily-pc 130568187	Red Hat Enterprise Linux	134
88	10.10.35.242 10.10.35.242	AIX 5.x / AIX 6.x	111
56	com-rhel70x64.... 10.10.35.241	Mac OS X	94
77	10.10.31.129 10.10.31.129	Windows 10 Enterprise	91
91	10.10.30.37 10.10.30.37	Windows 10 Enterprise	88
92	102354mbp15.lo... 10.0.1.91, fe80:0:...	Ubuntu Linux 17.04	82
99	i-03ef90e7b729... 172.31.17.3	Linux	72
98	PCDemoEC2-SA 172.31.28.41	Microsoft Windows	66

Security Analytics – Milestone Timelines



2020 | 2021

Nov 2019 – Milestone 1
Demo at QSC
Adv Correlation Engine

April 2020 – Milestone 2 (Alpha)
Adv Correlation Engine
MITRE ATT&CK Analytics
Connector Library

Aug 2020 – Milestone 3 (Beta)
SIEM Connectors
Incident Response
Real-Time Context Enrichment
Alert Triage, Investigation &
Prioritization

Nov 2020 – Milestone 4 (GA)
UEBA, Threat Hunting
Data Analytics
50+ Connector Library

Thank You

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